AUTHOR'S PREFACE

DUKING- more than twenty years' practical experience in open-hearth furnace management, I have frequently been faced with problems to which I was unable "to find satisfactory solutions. A pause in such practical activity has enabled me to investigate these questions as a whole, and in this connection I have taken advantage of all available literature on the subject which was at my disposal. The gaps remaining I have endeavoured to fill in to the best of my ability.

This was the origin of my book, and in now giving it to the public, I do so on the plea that the literature relating to the open-hearth process is very meagre, in spite of the daily increasing importance of the process, and because I hope to enlist further workers in clearing up the abstruse problems involved.

My guiding principle has been to ascertain the conditions which admitted of the complete utilisation of all raw materials in the best possible way.

I have devoted special attention to the quantitative side of the subject, since procedure can only be completely known or controlled provided the effect of all determining factors can Be quantitatively estimated.

Naturally, in consequence of this, the necessity arose of making numerous calculations, such as could be carried out by the most elementary means at my disposal.

In the course of my experience, I have felt the want of knowledge of the conditions governing the complete utilisation of fuel, and hence I devoted myself initially to the theory of gas producer working. The results arrived at appeared to me worthy of attention, although I was not so placed as to test all my conclusions by experiments of my own.